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DATE: Monday, September 27, 2004

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	<i>DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=ADJ</i>		
<input type="checkbox"/>	L7	L6 and alcohols	4
<input type="checkbox"/>	L6	L5 and placing	4
<input type="checkbox"/>	L5	L4 and wafer	9
<input type="checkbox"/>	L4	L3 and (stripping solution)	10
<input type="checkbox"/>	L3	L2 and (metal line)	447
<input type="checkbox"/>	L2	L1 and removing	56546
<input type="checkbox"/>	L1	residues and polymer	189812

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☐ 1. Document ID: US 20040050406 A1

Using default format because multiple data bases are involved.

L7: Entry 1 of 4

File: PGPB

Mar 18, 2004

PGPUB-DOCUMENT-NUMBER: 20040050406
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20040050406 A1

TITLE: Compositions and method for removing photoresist and/or resist residue at pressures ranging from ambient to supercritical

PUBLICATION-DATE: March 18, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Sehgal, Akshey	Eagle	ID	US	

US-CL-CURRENT: 134/26; 510/175, 510/176, 510/201

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	RWC	Draw De
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☐ 2. Document ID: US 20040011386 A1

L7: Entry 2 of 4

File: PGPB

Jan 22, 2004

PGPUB-DOCUMENT-NUMBER: 20040011386
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20040011386 A1

TITLE: Composition and method for removing photoresist and/or resist residue using supercritical fluids

PUBLICATION-DATE: January 22, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Sehgal, Akshey	Eagle	ID	US	

US-CL-CURRENT: 134/26; 510/175, 510/505

ABSTRACT:

h e b b g e e e f e e e f b e

A method of removing photoresist and/or resist residue from a substrate includes exposing the substrate to a supercritical fluid in combination with a co-solvent mixture comprising an organic solvent and an oxidizer. In one embodiment, the supercritical fluid is supercritical carbon dioxide and the co-solvent mixture includes 1,2-Butylene Carbonate, Dimethyl Sulfoxide and hydrogen peroxide. If desired, supercritical carbon dioxide in combination with a second co-solvent mixture may be subsequently applied to the substrate to rinse and dry the substrate. In one embodiment, the second co-solvent mixture includes isopropyl alcohol.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw. De
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☐ 3. Document ID: US 20020013240 A1

L7: Entry 3 of 4

File: PGPB

Jan 31, 2002

PGPUB-DOCUMENT-NUMBER: 20020013240
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20020013240 A1

TITLE: COMPOSITION AND METHOD FOR REMOVING RESIST AND ETCHING RESIDUES USING HYDROXYLAMMONIUM CARBOXYLATES

PUBLICATION-DATE: January 31, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
SAHBARI, JAVAD J.	SUNNYVALE	CA	US	

US-CL-CURRENT: 510/176; 216/100, 252/79.4, 510/109, 510/401

ABSTRACT:

A mixture of hydroxylamine partially neutralized with a weak carboxylic acid and an organic solvent such as an alkyl sulfoxide, a pyrrolidinone or a sulfone removes hardened photoresist and polymeric photoresist residues from a substrate with reduced metal corrosion.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw. De
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☐ 4. Document ID: US 6432209 B1

L7: Entry 4 of 4

File: USPT

Aug 13, 2002

US-PAT-NO: 6432209
DOCUMENT-IDENTIFIER: US 6432209 B1

TITLE: Composition and method for removing resist and etching residues using hydroxylazmmmonium carboxylates

DATE-ISSUED: August 13, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Sahbari; Javad J.	Sunnyvale	CA		

US-CL-CURRENT: 134/3; 510/176

ABSTRACT:

A mixture of hydroxylamine partially neutralized with a weak carboxylic acid and an organic solvent such as an alkyl sulfoxide, a pyrrolidinone or a sulfone removes hardened photoresist and polymeric photoresist residues from a substrate with reduced metal corrosion.

1 Claims, 0 Drawing figures

Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWC	Draw. Ds
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Term	Documents
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ALCOHOL	801784
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(L6 AND ALCOHOLS).PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD.	4

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☐ 1. Document ID: US 20040050406 A1

Using default format because multiple data bases are involved.

L4: Entry 1 of 10

File: PGPB

Mar 18, 2004

PGPUB-DOCUMENT-NUMBER: 20040050406

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040050406 A1

TITLE: Compositions and method for removing photoresist and/or resist residue at pressures ranging from ambient to supercritical

PUBLICATION-DATE: March 18, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Sehgal, Akshey	Eagle	ID	US	

US-CL-CURRENT: 134/26; 510/175, 510/176, 510/201

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw Ds
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☐ 2. Document ID: US 20040011386 A1

L4: Entry 2 of 10

File: PGPB

Jan 22, 2004

PGPUB-DOCUMENT-NUMBER: 20040011386

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040011386 A1

TITLE: Composition and method for removing photoresist and/or resist residue using supercritical fluids

PUBLICATION-DATE: January 22, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Sehgal, Akshey	Eagle	ID	US	

US-CL-CURRENT: 134/26; 510/175, 510/505

ABSTRACT:

h e b b g e e e f e e ef b e

A method of removing photoresist and/or resist residue from a substrate includes exposing the substrate to a supercritical fluid in combination with a co-solvent mixture comprising an organic solvent and an oxidizer. In one embodiment, the supercritical fluid is supercritical carbon dioxide and the co-solvent mixture includes 1,2-Butylene Carbonate, Dimethyl Sulfoxide and hydrogen peroxide. If desired, supercritical carbon dioxide in combination with a second co-solvent mixture may be subsequently applied to the substrate to rinse and dry the substrate. In one embodiment, the second co-solvent mixture includes isopropyl alcohol.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWC	Draw. D
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☐ 3. Document ID: US 20030140948 A1

L4: Entry 3 of 10

File: PGPB

Jul 31, 2003

PGPUB-DOCUMENT-NUMBER: 20030140948
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20030140948 A1

TITLE: Clean equipment for removing polymer residues on sidewalls of metal lines and method thereof

PUBLICATION-DATE: July 31, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Ni, Chih-Jung	Hsin-Chu		TW	
Jan, Jia-Shing	Taipei City		TW	

US-CL-CURRENT: 134/26; 134/102.1, 134/61

ABSTRACT:

A clean equipment for removing polymer residues on sidewalls of metal lines and method thereof are provided. The present clean equipment comprises a stripping solution bath, at least an organic solvent bath, an overflow bath and a dryer. A gas bubbler and a lattice-like cassette stage are positioned within the organic solvent bath. The gas bubbler provides gas flow in the organic solvent bath to increase the convection of the organic solvent. The lattice-like cassette stage is used for supporting cassettes for carrying wafers. By way of increasing the number of bubbling apertures of the gas bubbler and designing the gas bubbler structure in a way that preventing the bubbling apertures from being blocked by the lattice-like cassette stage, the convection effectiveness of the organic solvent is increased. Thereby, the stripping solution can be effectively removed with the organic solvent. Besides, lengthening the drip dry time of the wafer over each bath so as to eliminate the quantity of the stripping solution left on the wafer drawn in the overflow bath. By the above measures, metal corrosion occurred on the sidewalls of the metal lines formed on the wafer is significantly reduced.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWC	Draw. D
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☐ 4. Document ID: US 20020013240 A1

L4: Entry 4 of 10

File: PGPB

Jan 31, 2002

PGPUB-DOCUMENT-NUMBER: 20020013240
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20020013240 A1

TITLE: COMPOSITION AND METHOD FOR REMOVING RESIST AND ETCHING RESIDUES USING
HYDROXYLAMMONIUM CARBOXYLATES

PUBLICATION-DATE: January 31, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
SAHBARI, JAVAD J.	SUNNYVALE	CA	US	

US-CL-CURRENT: 510/176; 216/100, 252/79.4, 510/109, 510/401

ABSTRACT:

A mixture of hydroxylamine partially neutralized with a weak carboxylic acid and an organic solvent such as an alkyl sulfoxide, a pyrrolidinone or a sulfone removes hardened photoresist and polymeric photoresist residues from a substrate with reduced metal corrosion.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Drawings
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☐ 5. Document ID: US 20020013239 A1

L4: Entry 5 of 10

File: PGPB

Jan 31, 2002

PGPUB-DOCUMENT-NUMBER: 20020013239
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20020013239 A1

TITLE: Polymer remover

PUBLICATION-DATE: January 31, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Sahbari, Javad J.	Sunnyvale	CA	US	

US-CL-CURRENT: 510/175; 257/E21.255, 257/E21.313, 510/407, 510/412, 510/413, 510/505

ABSTRACT:

Disclosed are compositions and methods useful for the removal of polymeric material from substrates, such as electronic devices. The compositions and methods of the

present invention are particularly suitable for removing polymer residues from electronic devices following plasma etch processes.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw D
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☐ 6. Document ID: US 6554912 B2

L4: Entry 6 of 10

File: USPT

Apr 29, 2003

US-PAT-NO: 6554912

DOCUMENT-IDENTIFIER: US 6554912 B2

TITLE: Polymer remover

DATE-ISSUED: April 29, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Sahbari; Javad J.	Sunnyvale	CA		

US-CL-CURRENT: 134/26; 134/2, 134/22.17, 134/22.19, 134/25.4, 134/36, 134/42,
134/902, 257/E21.255, 257/E21.313, 510/175 , 510/176, 510/245, 510/254, 510/257,
510/506

ABSTRACT:

Compositions for the removal of polymeric material from a substrate are provided where the compositions include a polyol compound selected from (C.sub.3 -C.sub.20) alkanediols, substituted (C.sub.3 --C.sub.20)alkanediols, (C.sub.3 -C.sub.20) alkanetriols or substituted (C.sub.3 -C.sub.20)alkanetriols, a glyco ether, at least 5% wt water based on the total weight of the composition, and a fluoride salt selected from ammonium fluoride, ammonium bifluoride, ammonium-tetramethylammonium bifluoride or mixtures thereof. Methods of removing polymeric material using these compositions are also provided.

14 Claims, 0 Drawing figures

Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWIC	Draw D
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☐ 7. Document ID: US 6432209 B1

L4: Entry 7 of 10

File: USPT

Aug 13, 2002

US-PAT-NO: 6432209

DOCUMENT-IDENTIFIER: US 6432209 B1

TITLE: Composition and method for removing resist and etching residues using hydroxylazmmmonium carboxylates

DATE-ISSUED: August 13, 2002

h e b b g e e f e e ef b e

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Sahbari; Javad J.	Sunnyvale	CA		

US-CL-CURRENT: 134/3; 510/176

ABSTRACT:

A mixture of hydroxylamine partially neutralized with a weak carboxylic acid and an organic solvent such as an alkyl sulfoxide, a pyrrolidinone or a sulfone removes hardened photoresist and polymeric photoresist residues from a substrate with reduced metal corrosion.

1 Claims, 0 Drawing figures

Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWC	Draw Ds

☐ 8. Document ID: US 6107202 A

L4: Entry 8 of 10

File: USPT

Aug 22, 2000

US-PAT-NO: 6107202

DOCUMENT-IDENTIFIER: US 6107202 A

TITLE: Passivation photoresist stripping method to eliminate photoresist extrusion after alloy

DATE-ISSUED: August 22, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Chiu; Chih-Kang	Yung-Ho			TW
Pan; Sheng-Liang	Hsin-Chu			TW

US-CL-CURRENT: 438/690; 257/E21.255, 257/E21.581, 438/120, 438/618, 438/700, 438/750, 438/781, 438/906, 438/948, 438/963

ABSTRACT:

A method for stripping positive photoresist from a keyhole 17 in a passivation layer 18 before a heating process using NMP solvent strips after a photoresist strip. The process is summarized by the 5 steps as follows: (1) Photoresist strip 1 (e.g., EKC 830), (2) Photoresist strip 2 (e.g., EKC 830 photoresist stripper), (3) N-methyl-2-pyrrolidone (NMP) solvent strip-agitated (solvent is preferably the same solvent in the photoresist stripper (1 & 2) (4) NMP solvent strip-agitated and (5) H.sub.2O rinse. The NMP solvent strip steps (3) and (4) remove photoresist residue (16, FIG. 1) in the key hole 17. This prevents the formation of photoresist extrusions 24 while annealing the metal lines 14.

16 Claims, 3 Drawing figures

Exemplary Claim Number: 15

Number of Drawing Sheets: 2

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KMNC	Draw D
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☐ 9. Document ID: US 20030140948 A1

L4: Entry 9 of 10

File: DWPI

Jul 31, 2003

DERWENT-ACC-NO: 2003-607241

DERWENT-WEEK: 200357

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TITLE: Cleaning equipment for removing polymer residues, such as metal corrosion, on sidewalls of metal lines formed on wafer, has dryer for drying water left on wafer after water flow is provided on wafer by overflow bath

INVENTOR: JAN, J; NI, C

PRIORITY-DATA: 2002US-0057906 (January 29, 2002)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
<u>US 20030140948 A1</u>	July 31, 2003		013	B08B003/04

INT-CL (IPC): B08 B 3/04; B08 B 3/08; B08 B 3/10

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KMNC	Draw D
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☐ 10. Document ID: US 6107202 A

L4: Entry 10 of 10

File: DWPI

Aug 22, 2000

DERWENT-ACC-NO: 2000-646373

DERWENT-WEEK: 200062

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TITLE: Process for stripping photoresist in semiconductor manufacture involves forming metal pattern, passivation layer sequentially on semiconductor, developing photoresist pattern and etching passivation layer

INVENTOR: CHIU, C; PAN, S

PRIORITY-DATA: 1998US-0152349 (September 14, 1998)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
<u>US 6107202 A</u>	August 22, 2000		010	H01L021/308

INT-CL (IPC): H01 L 21/308

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KMNC	Draw D
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Term	Documents
STRIPPING	147628
STRIPPINGS	417
SOLUTION	4524063
SOLN	446455
SOLNS	52719
SOLUTIONS	676088
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(L3 AND (STRIPPING SOLUTION)).PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD.	10

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